



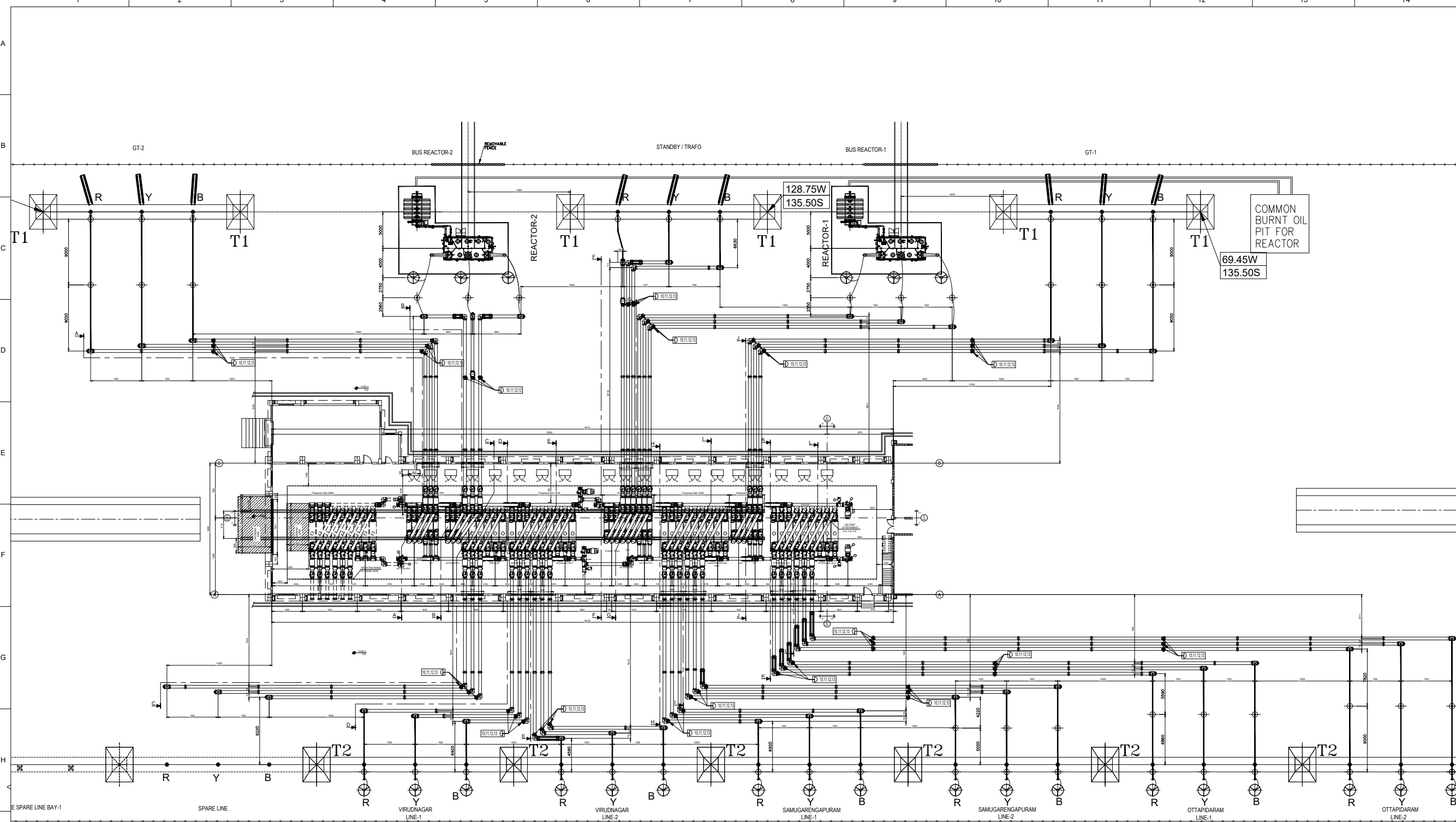


GIS LAYOUT

16.04.2020	4	AG	Revised (1HYG900056-2 Rev AG) with minor correction in section dimensions (typo error) and the GT-1, GT-2, ST tower & gantry are aligned in this drawing in line with GIS and Pothead yard Plan & Section Layout-Rev 06.
07.04.2020	3	AF	Revised (1HYG900056-2 Rev AF) in line with comments vide TCE.11403A-EL-VDT-413 dated 18.03.2020
28.02.2020	2	AE	Revised (1HYG900056-2 Rev AE) in line with comments vide TCE.11403A-EL-VDT-349 dated 02.01.2020
20.12.2019	1	AD	Revised (1HYG900056-2 Rev AD) in line with comments vide TCE.11403A-EL-VDT-326 dated 21.11.2019
08.11.2019	0	AC	first submission (1HYG900056-2 Rev AC)
BHEL REV DATE	BHEL REV NO.	ABB REV NO.	BHEL REV INDEX
PROJECT		2X660 MW UDANGUDI SUPERCRITICAL TPS, STAGE-I	
OWNER		TAMILNADU GENERATION AND DISTRIBUTION CORPORATION LIMITED (TANGEDCO) 	
OWNER'S CONSULTANT		TATA CONSULTING ENGINEERS LIMITED BENGALURU 	
CONTRACTOR		BHARAT HEAVY ELECTRICALS LIMITED 	
SUPPLIER		ABB INDIA LIMITED 	
DOC. ID.		1HYG900056-2_REV 04	
NO. OF SHEETS ATTACHED		5	



EOT Crane Specification (minimum) - Inside GIS Hall	
Capacity	Min 3.0 T
Type	RADIO Controlled with remote
HOIST Lifting Speed	0.315 to 3.15MPM step less speed through VVVF AC Drive
C.T Speed	1.6 to 16 MPM step less speed through VVVF AC Drive
L.T Speed	2 to 20 MPM step less speed through VVVF AC Drive

GIS (SCOPE OF SUPPLY) _____
GIS (FUTURE) _____

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. CIVIL DETAILS (DOORS / STAIRS / ...) AND STEEL STRUCTURE ON THIS DRAWING ARE FOR INFORMATION ONLY. FOR DETAILS REFER TO RELEVANT DRAWINGS.
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4. BUILDING SHOWN IN THIS DRAWING IS PRELIMINARY TO INDICATE THE OVERALL BUILDING DIMENSIONS AND FREEZE LOCATION. FOR DETAILED DRAWING REFER BHEL GIS BUILDING DRAWING (CONCEPTUAL & CIVIL).

LEGEND	
1 -	CIRCUIT BREAKER
2 -	DISCONNECTOR & EARTHING SWITCH
3 -	DISCONNECTOR
4 -	HIGH SPEED EARTHING SWITCH
5 -	CURRENT TRANSFORMER
6 -	VOLTAGE TRANSFORMER
7 -	SF6 TO AIR BUSHING
8 -	LOCAL CONTROL CUBICLE (LCC)
9 -	BUFFER GAS COMPARTMENT
10 -	GAS DENSITY MONITOR
11 -	PRESSURE RELIEF DEVICE
12 -	SF6 CONNECTION (GAS FILLING POINT)
13 -	PARTIAL DISCHARGE SENSOR

REFERENCE DOCUMENTS		
Document Title	ABB Doc. No.	
PROJECT SPECIFIC GIS PARAMETERS	1HYG900056-6	
SLGD	1HYG900056-1	
CIVIL WORK REQUIREMENTS	1HYG900056-3	

AG	15.04.2020	Debasish M	UP SIDE GANTRY SHIFTED & DIMENSION CORRECTED IN SECTION
AF	06.04.2020	Debasish M	ADDITIONAL BUS SECTION/USER, FAES & BUS PT ADDED
AE	24.02.2020	DEBASISH M	BAY CHANGED
AD	19.12.2019	DEBASISH M	BAY POSITIONING INTERCHANGED
AC	08.11.2019	DEBASISH M	MODIFIED AS PER CUSTOMER COMMENTS
AB	06.11.2019	DEBASISH M	MODIFIED AS PER CUSTOMER COMMENTS
AA	25.10.2019	DEBASISH M	FIRST ISSUE
REV	DATE	NAME	MODIFICATION

VENDOR DRAWING AND BHEL DRAWING SHALL MATCH EACH OTHER.

TATA CONSULTING ENGINEERS LIMITED
VENDOR DRAWING STATUS

CATEGORY	DESCRIPTION
<input checked="" type="checkbox"/> CAT-1	Drawing/documents approved for final distribution. BHEL will proceed with manufacturing/ fabrication/construction.
<input type="checkbox"/> CAT-2	Drawing/documents cleared for manufacturing/ fabrication/construction subject to incorporating the comments given. BHEL to resubmit the drawing for Approval in Category - 1. Comments will be marked on the drawing documents.
<input type="checkbox"/> CAT-3	Drawing document will be corrected as per comment and resubmitted by BHEL for further review/checking.
<input type="checkbox"/> CAT-4	Drawing document of this category are for information only and not for approval. Information furnished on the document is noted.

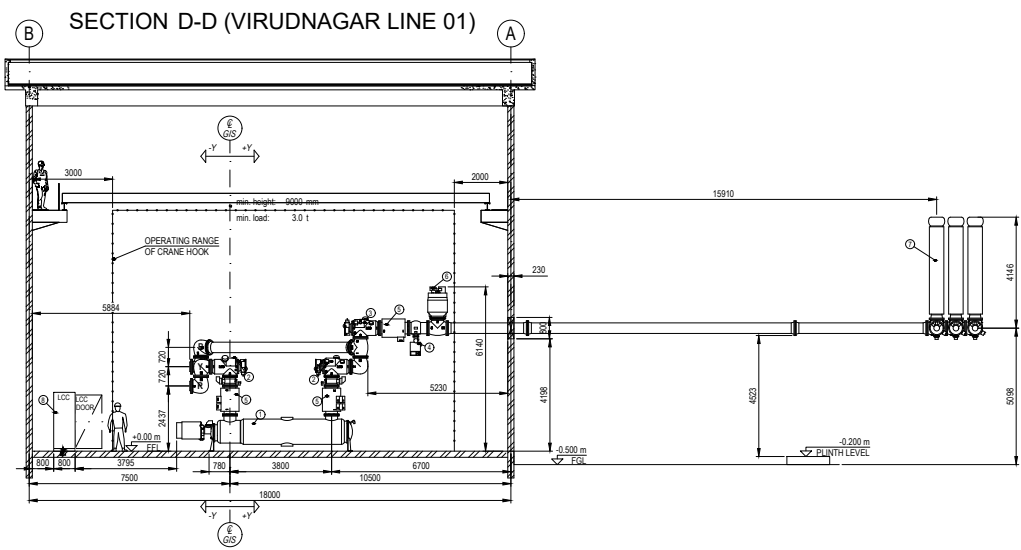
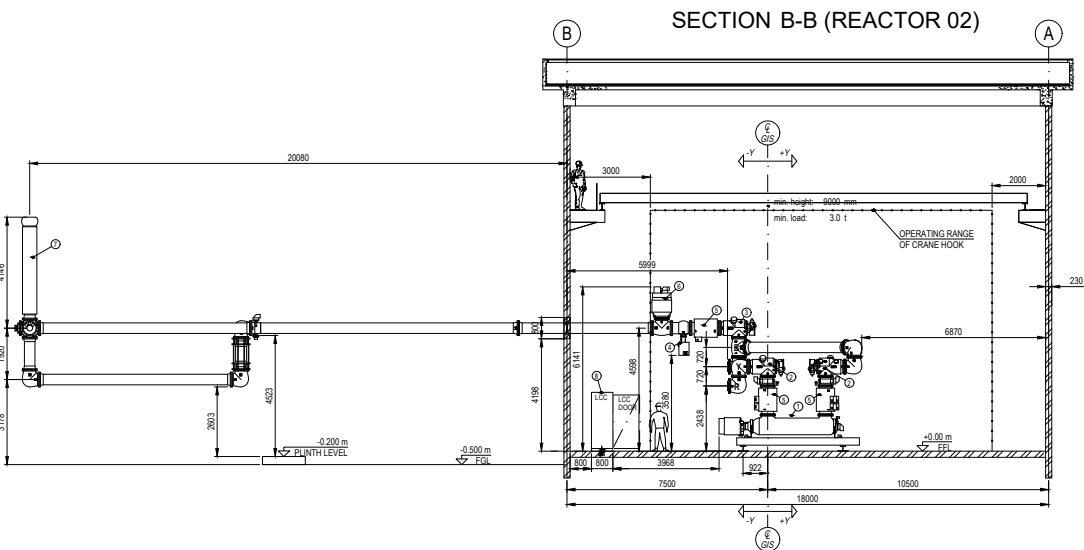
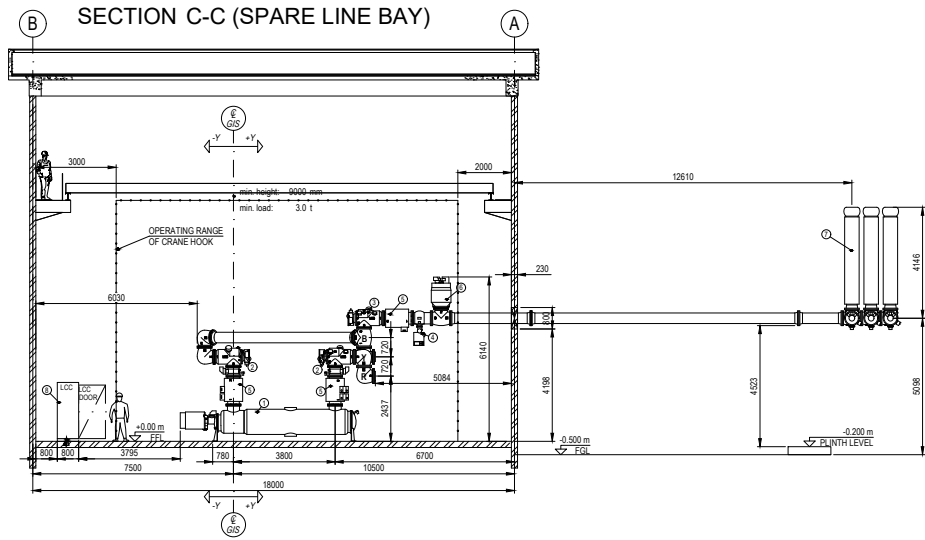
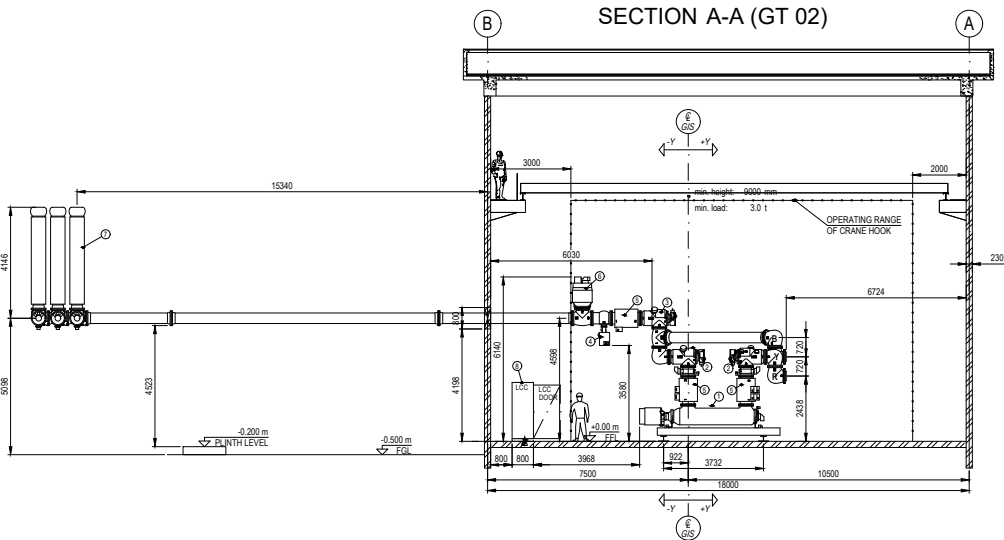
Note:

- It is mandatory to close documents with Code 2 & 3 to Code 1 in agreed contract period or 2 weeks, whichever is lower.
- Any design changes / modification required to be carried out in Code 4 Drawings / Documents shall be the responsibility of BHEL. BHEL to resubmit reflecting the Design Changes for information.

Approval conveyed herein neither relieves the Vendor/Contractor of his contractual obligations and his responsibilities for correctness of dimensions, materials of construction, weights, quantities, design details, assembly fits, performance requirements and conformity of supplies with the Indian Statutory Laws as may be applicable, nor does it limit the purchaser's rights under the contract.

Reviewed by S.S. Sathish Date

PROJECT	2X660 MW UDANGUDI SUPERCRITICAL TPS, STAGE-I		
CUSTOMER	TAMILNADU GENERATION AND DISTRIBUTION CORPORATION LIMITED (TANGEDCO)		
CONSULTANT	TATA CONSULTING ENGINEERS LIMITED BENGALURU		
	BHARAT HEAVY ELECTRICALS LTD TRANSMISSION BUSINESS GROUP NOIDA		
Draft:	15.04.2020	Debasish Mahapatra	Derived from:
Approved:	15.04.2020	Anurag Pandit	Replaces:
Released:	15.04.2020	Debasish Mahapatra	Responsible department: PGHV-GIS ENGG
Order number:	3100115843	Revised:	AG
Scale:	1/200	Doc type:	DW1
Format:	A0	Language:	EN
Sheet no:	005	Document number:	1HYG900056-2
			001



EOT Crane Specification (minimum) - Inside GIS Hall	
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Type	RADIO Controlled with remote
HOIST Lifting Speed	0.315 to 3.15MPM step less speed through VVVF AC Drive
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GIS (SCOPE OF SUPPLY) _____
GIS (FUTURE) - - - - -

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LEGEND

- CIRCUIT BREAKER
- DISCONNECTOR & EARTHING SWITCH
- DISCONNECTOR
- HIGH SPEED EARTHING SWITCH
- CURRENT TRANSFORMER
- VOLTAGE TRANSFORMER
- SF6 TO AIR BUSHING
- LOCAL CONTROL CUBICLE (LCC)
- BUFFER GAS COMPARTMENT
- GAS DENSITY MONITOR
- PRESSURE RELIEF DEVICE
- SF6 CONNECTION (GAS FILLING POINT)
- PARTIAL DISCHARGE SENSOR

REFERENCE DOCUMENTS

Document Title	ABB Doc. No.
PROJECT SPECIFIC GIS PARAMETERS	1HYG900056-6
SLDG	1HYG900056-1
CIVIL WORK REQUIREMENTS	1HYG900056-3

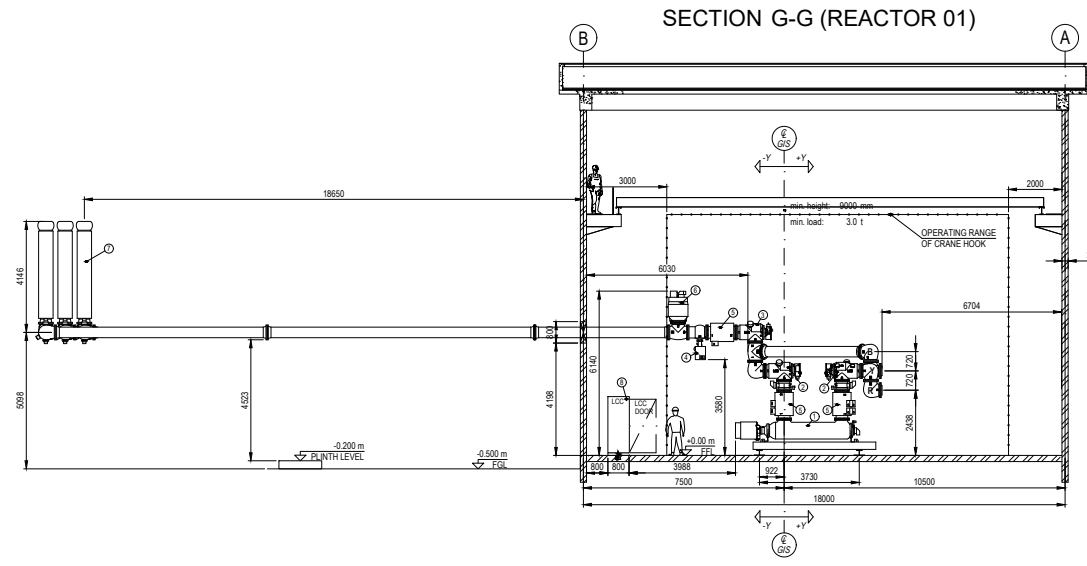
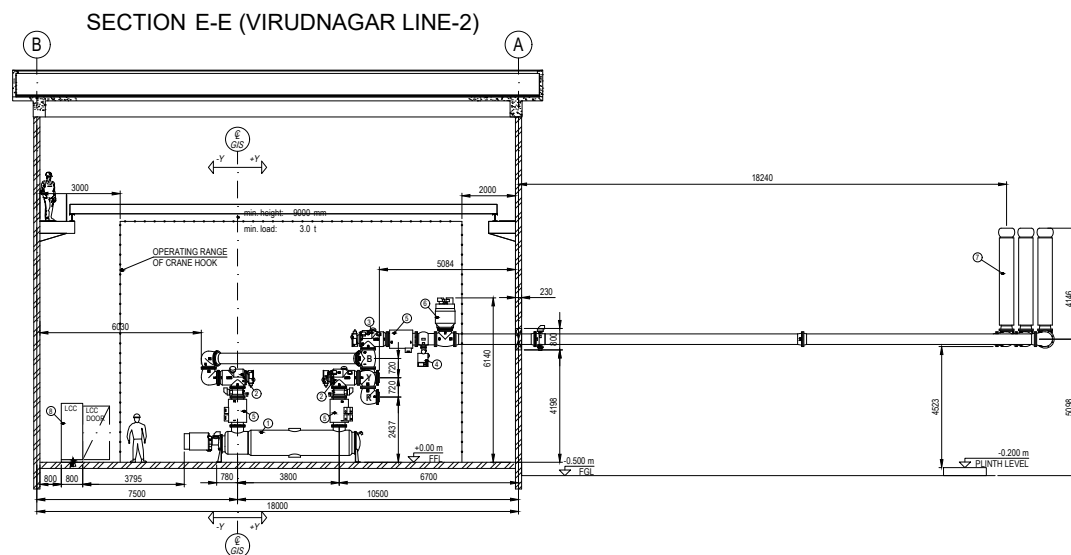
REV	DATE	NAME	MODIFICATION
AG	15.04.2020	Debasish M	UP SIDE GANTRY SHIFTED & DIMENSION CORRECTED IN SECTION
AF	06.04.2020	Debasish M	ADDITIONAL BUS SECTIONALISER, FAES & BUS PT ADDED
AE	24.02.2020	DEBASISH M	BAY CHANGED
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AA	25.10.2019	DEBASISH M	FIRST ISSUE

PROJECT	2X660 MW UDANGUDI SUPERCRITICAL TPS, STAGE-I			
CUSTOMER	TAMILNADU GENERATION AND DISTRIBUTION CORPORATION LIMITED (TANGEDCO)			
CONSULTANT	TATA CONSULTING ENGINEERS LIMITED BENGALURU			
	BHARAT HEAVY ELECTRICALS LTD TRANSMISSION BUSINESS GROUP NOIDA			
Draft:	13.04.2020	Debasish Mahapatra	Derived from:	Separate BOM: -
Approved:	13.04.2020	Anurag Pandit	Replaces:	-
Released:	13.04.2020	Debasish Mahapatra	Responsible department:	SF6 SWITCHGEAR ELK-3420
Order number:	3100115843		Revised:	2x660 MW UDANGUDI TPS, STAGE-I
			AG	SECTION GIS LAYOUT
			ABB India Ltd	Document number: 1HYG900056-2
			under license of ABB Technology Ltd	
			Scale:	1/100
			Doc type:	DW1
			Format:	A0
			Language:	EN
			Sheet no:	005
			Sheet no:	002

1HYG900056-2

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EOT Crane Specification (minimum) - Inside GIS Hall	
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GIS (SCOPE OF SUPPLY) —

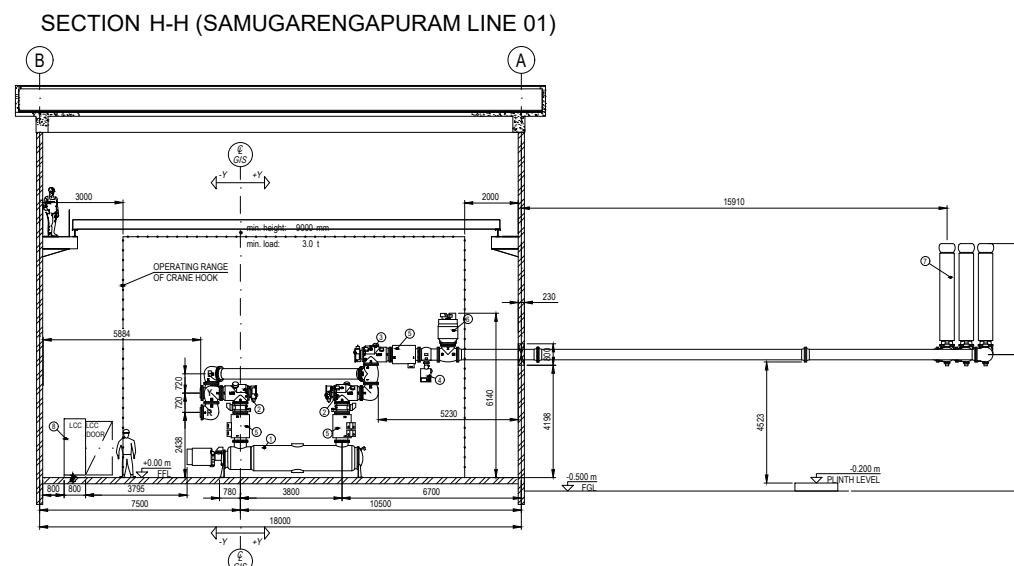
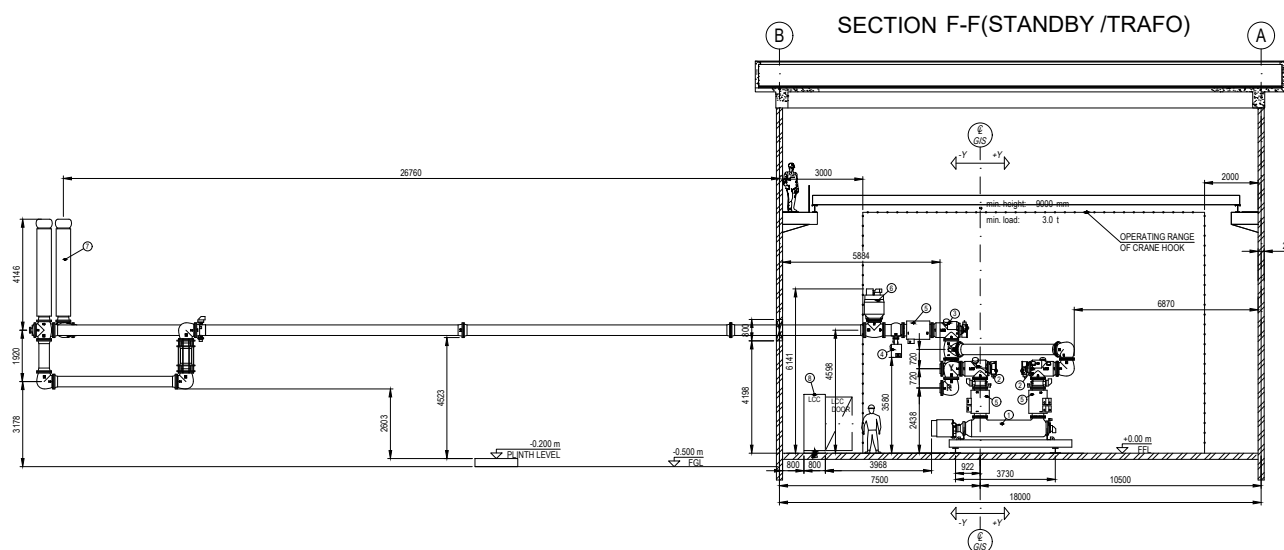
GIS (FUTURE)	-----
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LEGEND





- | | |
|----|--------------------------------------|
| 1 | - CIRCUIT BREAKER |
| 2 | - DISCONNECTOR & EARTHING SWITCH |
| 3 | - DISCONNECTOR |
| 4 | - HIGH SPEED EARTHING SWITCH |
| 5 | - CURRENT TRANSFORMER |
| 6 | - VOLTAGE TRANSFORMER |
| 7 | - SFG TO AIR BUSHING |
| 8 | - LOCAL CONTROLS (CUBICLE ECC) |
| 9 | - BUFFER GAS COMPARTMENT |
| 10 | - GAS DENSITY MONITOR |
| 11 | - PRESSURE RELIEF DEVICE |
| 12 | - SFG CONNECTION (GAS FILLING POINT) |
| 13 | - PARTIAL DISCHARGE SENSOR |



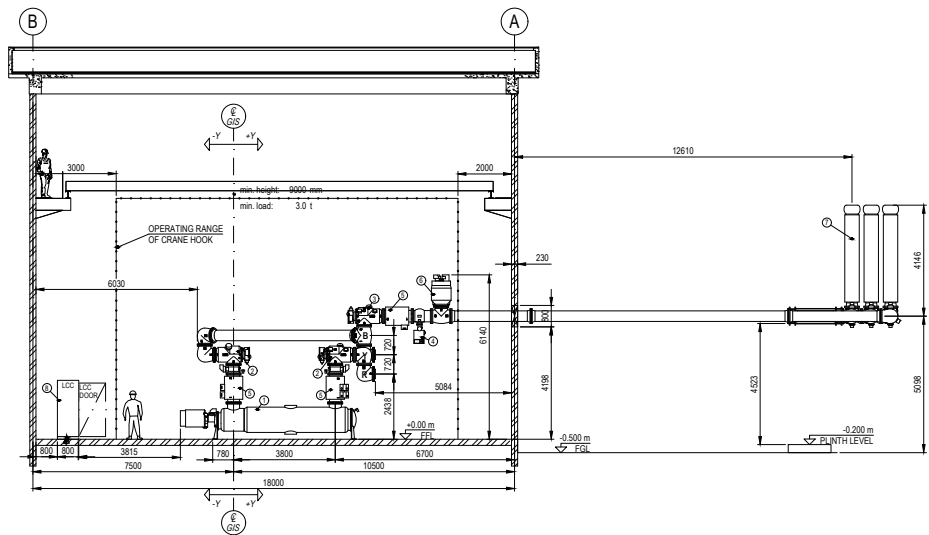
REFERENCE DOCUMENTS

Document Title	ABB Doc. No.	
PROJECT SPECIFIC GIS PARAMETERS	1HYG900056-6	
SLGD	1HYG900056-1	
CIVIL WORK REQUIREMENTS	1HYG900056-3	

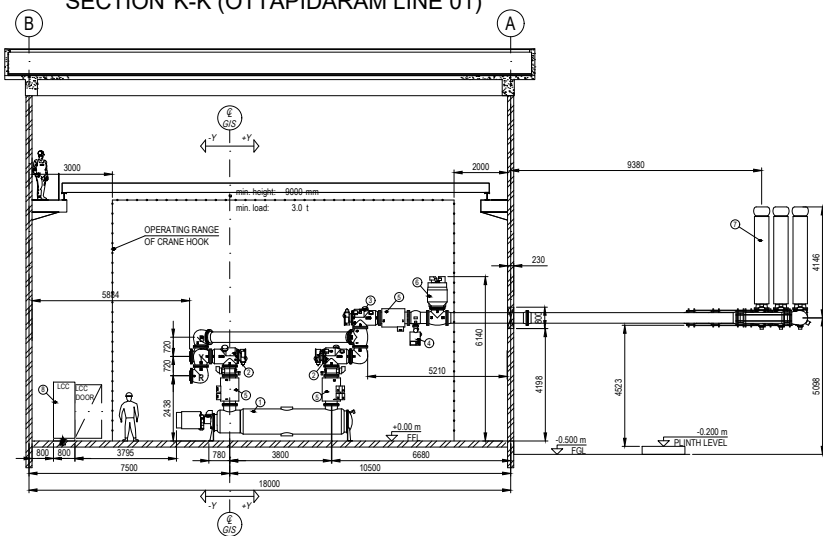
AG	15.04.2020	DEBASISH M	UP SIDE GANTRY SHIFTED & DIMENSION CORRECTED IN SECTION
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AA	25.10.2019	DEBASISH M	FIRST ISSUE
REV	DATE	NAME	MODIFICATION

PROJECT	2X660 MW UDANGUDI SUPERCRITICAL TPS, STAGE-I									
CUSTOMER	 TAMILNADU GENERATION AND DISTRIBUTION CORPORATION LIMITED (TANGEDCO)									
CONSULTANT	 TATA CONSULTING ENGINEERS LIMITED BENGALURU									
 Maharaja Company	BHARAT HEAVY ELECTRICALS LTD TRANSMISSION BUSINESS GROUP NOIDA									
Draft: 13.04.2020 Approved: 13.04.2020 Released: 13.04.2020 Order number: 3100115843	Debasis Mahapatra Anurag Pandit Debasis Mahapatra	Derived from: - Replaces: - Responsible department: GHV-GIS ENGG Revision: AG	Separate BOM: - SFB SWITCHGEAR ELK-3/420 2x660 MW UDANGUDI TPS,STAGE-I SECTION GIS LAYOUT	Scale: 1/100	Doc type: DW1	Format: A0	Language: EN	Sheet: 005	Sheet number: 007	
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Document number: 1HYG900056-2										

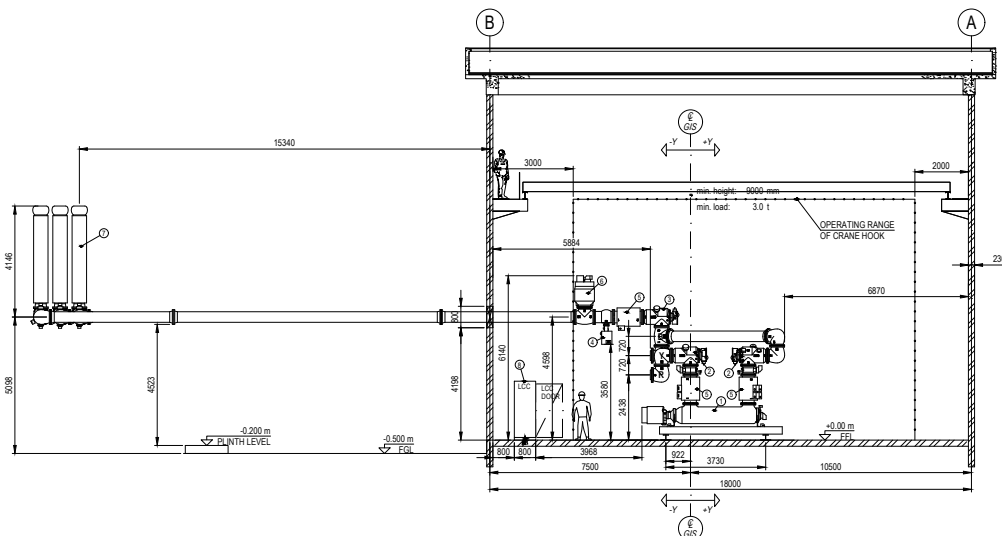
SECTION I-I (SAMUGARENGAPURAM LINE 02)



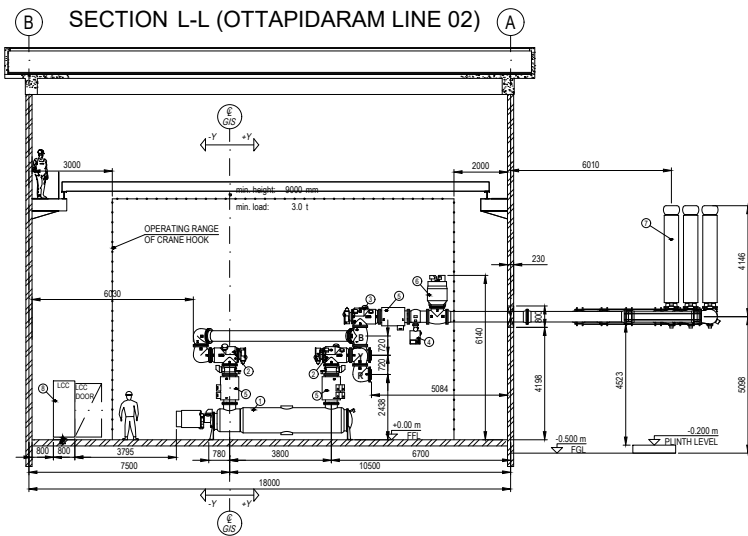
SECTION K-K (OTTAPIDARAM LINE 01)



SECTION J-J (GT 01)



SECTION L-L (OTTAPIDARAM LINE 02)



EOT Crane Specification (minimum) - Inside GIS Hall

Capacity	Min 3.0 T
Type	RADIO Controlled with remote
HOIST Lifting Speed	0.315 to 3.15MPM step less speed through VVVF AC Drive
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GIS (SCOPE OF SUPPLY)

GIS (FUTURE)

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LEGEND

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REFERENCE DOCUMENTS

Document Title	ABB Doc. No.
PROJECT SPECIFIC GIS PARAMETERS	1HYG900056-6
SLCD	1HYG900056-1
CIVIL WORK REQUIREMENTS	1HYG900056-3

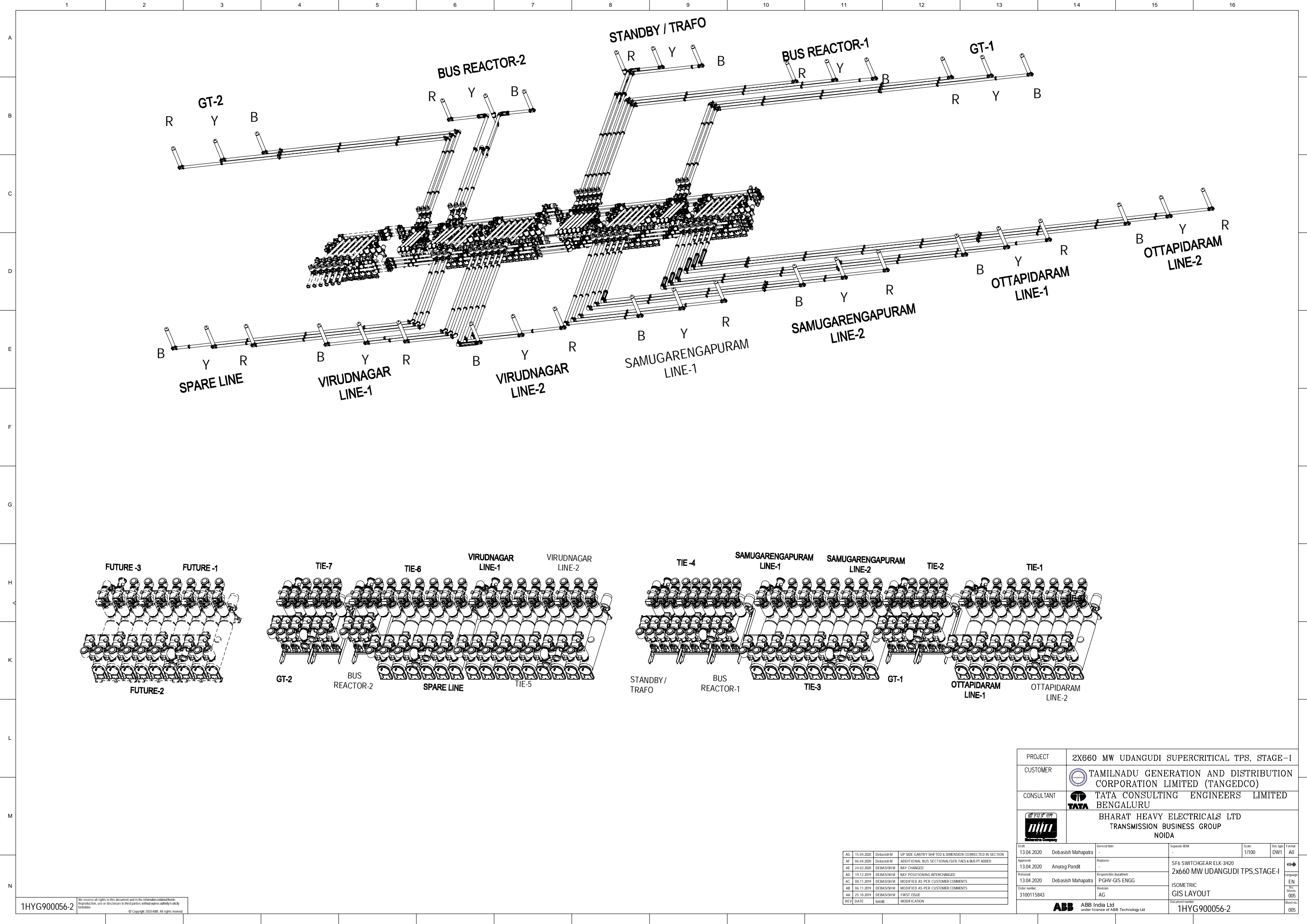
REV	DATE	NAME	MODIFICATION
AG	15.04.2020	Debasish M	UP SIDE GANTRY SHIFTED & DIMENSION CORRECTED IN SECTION
AF	06.04.2020	Debasish M	ADDITIONAL BUS SECTION/USER, FAES & BUS PT ADDED
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AA	25.10.2019	DEBASISH M	FIRST ISSUE

PROJECT	2X660 MW UDANGUDI SUPERCRITICAL TPS, STAGE-I		
CUSTOMER	 TAMILNADU GENERATION AND DISTRIBUTION CORPORATION LIMITED (TANGEDCO)		
CONSULTANT	 TATA CONSULTING ENGINEERS LIMITED BENGALURU		
 Bharat Heavy Electricals Ltd	TRANSMISSION BUSINESS GROUP NOIDA		
	Separate BOM: 1/100 Doc type: DW1 Format: A0		
Draft: 13.04.2020 Debasish Mahapatra	Derived from: -	SF6 SWITCHGEAR ELK-3420	
Approved: 13.04.2020 Anurag Pandit	Replaces: -	2x660 MW UDANGUDI TPS, STAGE-I	
Released: 13.04.2020 Debasish Mahapatra	Responsible department: PGHV-GIS ENGG	SECTION GIS LAYOUT	
Order number: 3100115843	Revised: AG	Document number: 1HYG900056-2	
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1HYG900056-2

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	 BHARAT HEAVY ELECTRICALS LTD TRANSMISSION BUSINESS GROUP NOIDA		
Draft	13.04.2020	Debasish Mahapatra	Separate BOM
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Released	13.04.2020	Debasish Mahapatra	Responsible department
Order number	3100115843	AG	Revision
ABB India Ltd under license of ABB Technology Ltd		SF6 SWITCHGEAR ELK-3/420 2x660 MW UDANGUDI TPS, STAGE-I	
		ISOMETRIC GIS LAYOUT	
		1HYG900056-2	
		005	